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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/707,452	11/07/2000	Joseph C. Fjelstad	TESSERA 3.0-051 FWC DIV	8689
530	7590	01/13/2004	EXAMINER	
LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK 600 SOUTH AVENUE WEST WESTFIELD, NJ 07090			CHANG, RICK KILTAE	
			ART UNIT	PAPER NUMBER
			3729	

DATE MAILED: 01/13/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/707,452

Applicant(s)

FJELSTAD, JOSEPH C.

Examiner

Rick K. Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 48-58 is/are pending in the application.
- 4a) Of the above claim(s) that are not recited in item 6 below is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 48-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/19/03 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 7-9, 11-12, 18-20 and 48-50, 52-58 are rejected under 35 U.S.C. 102(b) as being anticipated by Akiyama et al (US 3,801,388).

Akiyama discloses in Figs. 7A-7F of a flexible dielectric support substrate 42 with cooling towers 44 with at least one edge along the elongation direction as disclosed in the applicant's specification. 40 is a microelectronic device and overlies the support structure (40 overlies the second surface (where bottom of 40 meets 42, which facing away from the posts)) and electrically connected to the posts. 31 is .25 mm thick. 39 is plated and is a highly conductive layer coupled to each of the metallic portions. 37 is etch-resistant portion (col. 5, line 16). 40 and 48 are microelectronic devices. 48 is attached to the substrate using an adhesive (col. 7, line 31) which is a compliant layer. 47 is attached by soldering. 40 and 41 are a socket.

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34, 34a...34c are electrically conductive leads that are connected to bond pads as shown by Fig. 8 and are etch-resistant metal. Fig. 7A shows providing etch-resistant metal before coupling the conductive sheet to the first surface of the support substrate (Fig. 7D). 34 are compliant pads.

NOTE: Please provide reference numerals to all the claimed limitations as well as support in the disclosure for better clarity. Applicants are duly reminded that a full and proper response to this Office Action that includes any amendment to the claims and specification of the application as originally filed requires that the applicant point out the support for any amendment made to the disclosure, including the claims. See 37 CFR 1.111 and MPEP 2163.06.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 13-14 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyama et al (US 3,801,388) in view of J. J. Steranko (US 3,465,435).

Akiyama fails to disclose soldering a portion of each post remote from the support structure to a contact on a PCB.

Steranko discloses soldering a portion of each post (24 and 23) remote from the support structure (14) to a socket on a PCB (11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Akiyama by soldering a portion of each post remote from the support

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structure to a socket on a PCB, as taught by Steranko, for the purpose of electrically and mechanically attaching the different components.

6. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyama et al (US 3,801,388) in view of Goldman (US 5,239,746).

Akiyama fails to disclose providing brazing buttons that extends from one via and couples with others to one of the bond pads; and providing a plurality of conductive vias extending from the first surface of the support structure to the second surface of the support structure, each via positioned beneath and in electrical contact with one post and connecting each bond pad to a respective post through a respective conductive via.

Goldman discloses providing brazing buttons (250A) that extends from one via and couples with others to one of the bond pads (col. 4, lines 56-68 and col. 5, lines 1-34); and providing a plurality of conductive vias (290-5 and 290-4) extending from the first surface of the support structure to the second surface of the support structure, each via positioned beneath and in electrical contact with one post (250A-1 and 250A-2) and connecting each bond pad (250C and 250E) to a respective post through a respective conductive via (Fig. 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Akiyama by providing brazing buttons that extends from one via and couples with others to one of the bond pads, as taught by Goldman, for the purpose of electrically communicating with other components from both surfaces of a PCB.

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyama et al (US 3,801,388)/Goldman (US 5,239,746) as applied to claims 1, 11 and 15-16 above, and further in view of Lin et al (US 5,273,938).

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Akiyama/Goldman fail to disclose removing the support substrate.

Lin discloses removing the support substrate (col. 2, lines 12-14).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Akiyama/Goldman by removing the support substrate, as taught by Lin, for the purpose of providing an electronic circuitry having a minimum thickness for easy handling and assembly.

NOTE: Please provide reference numerals to all the claimed limitations as well as support in the disclosure for better clarity. Applicants are duly reminded that a full and proper response to this Office Action that includes any amendment to the claims and specification of the application as originally filed requires that the applicant point out the support for any amendment made to the disclosure, including the claims. See 37 CFR 1.111 and MPEP 2163.06.

Response to Arguments

8. Applicant's arguments filed 11/19/03 have been fully considered but they are not persuasive.

Applicants' concerns are addressed above.

Conclusion

9. **Please provide reference numerals (either in parentheses next to the claimed limitation or in a table format with one column listing the claimed limitation and another column listing corresponding reference numerals in the remark section of the response to the Office Action) to all the claimed limitations as well as support in the disclosure for better clarity. Applicants are duly reminded that a full and proper response to this Office**

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Action that includes any amendment to the claims and specification of the application as originally filed requires that the applicant point out the support for any amendment made to the disclosure, including the claims. See 37 CFR 1.111 and MPEP 2163.06.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick K. Chang whose telephone number is (703) 308-4784. The examiner can normally be reached on 5:30 AM to 1:30 PM, Monday through Thursday.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.



**RICHARD CHANG
PRIMARY EXAMINER**

RC
January 12, 2004